SENATE NATURAL RESOURCES
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BEFORE THE BOARD OF ENVIRONMENTAL REVIEW
OF THE STATE OF MONTANA

IN THE MATTER OF:	) CASE BER 2007-07-AQ
SOUTHERN MONTANA ELECTRIC	)
GENERATION AND TRANSMISSION	)
COOPERATIVE - HIGHWOOD	)
GENERATING STATION	)
AIR QUALITY PERMIT NO. 3423-00	)

TRANSCRIPT OF PROCEEDINGS - VOLUME III

Heard at Room 111 of the Metcalf Building
1520 East Sixth Avenue
Helena, Montana
January 23, 2008
8:00 a.m.

BEFORE CHAIRMAN JOSEPH RUSSELL;
BOARD MEMBERS LARRY MIRES, HEIDI KAISER, GAYLE SKUNKCAP, BILL ROSSBACH, ROBIN SHROPSHIRE, and DON MARBLE

PREPARED BY: LAURIE CRUTCHER, RPR
COURT REPORTER, NOTARY PUBLIC
P.O. BOX 1192
HELENA, MT 59624
(406) 442-8262

A. Mr. Chairman, members of the Board, for the record, my name is Eric Merchant, and I am an air quality specialist with the Montana Department of Environmental Quality's Air Resources Management Bureau.

Q. And how long have you been employed with the Department's air quality program?

A. Just under nine-and-a-half years.

Q. Would you please describe your current position with the Department.

A. Currently, I have just taken a new position with the Department. I am in air quality program development in the Air Quality Policy and Planning Section.

Q. Would you please describe any previous positions that you've held with the Department.

A. Prior to that, up until a couple of months ago, for a period just over nine years, I was in the Air Quality Permitting Section, and within that position -- I had a couple different positions within the Air Quality Permitting Section, beginning with coming in and working with portable-type sources and some other smaller, minor sources. And then over the last several years, I've been working in permitting major sources -- actually, the whole gamut of sources, but primarily in major source permitting.

Q. Before you came to work for the Department, did

you hold any previous positions in the environmental field?

A. Just prior to coming to work for the Montana Department of Environmental Quality, I was an air quality -- I'm sorry, an environmental consultant, working on issues in air, water, waste, all those types of issues.

Q. And would you please describe for Board any college education that you've received related to your employment with the Department.

A. I have a bachelor of science in biology, a minor in -- and a minor in environmental studies, and then I also have an MPH, a master's in environmental and occupational health.

Q. Mr. Merchant, have you taken any training courses related to your employment for the Department that dealt specifically with PSD permitting?

A. I've taken many courses dealing with PSD permitting; specifically, some introductory, intermediate, and advanced courses in major new source review or major NSR permitting, along with a gamut of training courses that deals secondarily with BACT determination training, effective permit writing dealing with major source permitting. Just a series of training courses.

Q. How frequently have you attended training courses related to air quality permitting?

A. I would say, on average, one or two, maybe three courses a year.

Q. Do you have any rule development experience related to air quality permitting?

A. I do.

Q. And could you describe that experience briefly for the Board, please.

A. I was -- Based on litigation on another proposed power plant in Montana, I was the lead writer of a rule for presentation to the Board titled the "Montana Top-Down BACT Rule" or "BACT Rule," and we presented that -- we presented that to the Board for an initiation, and it was not adopted by the Board.

And in addition to that, I was the lead rule writer on a rule -- well, essentially, modification of our rules to incorporate the federal new resource review reform rules. In that case, Montana ultimately made a determination or sent a determination to the federal EPA indicating that our program was at least as stringent or more stringent than the proposed -- or the new resource review reform package, and so we did not adopt those rules either.

And then one other rule that I worked on for adoption by the Board was our initial -- our initial rule development project for registration of minor sources, and, specifically, portable-type sources, registration or

between those technologies.

A. A dry ESP would be collecting the particles, the pollutants in a dry process; whereas a wet ESP would have a wet substrate on the collection plate, or the cleaning would be accomplished through a wet process.

The teflon bag in this case would be a coating on the fiberglass bag, and the fiberglass bag would be, in this context, just a standard fiberglass filter bag.

MR. SKUNKCAP: Thank you.

EXAMINATION

BY MS. SHROPSHIRE:

Q. So you said that you used a top down BACT approach for this permit?

A. The applicant used a five step process, which I would generally describe as a top down BACT process.

Q. So in a top down BACT process, is LAER a requirement?

A. LAER is not associated with BACT. BACT is a process, and LAER is a process. LAER is applicable to the analysis of a project proposing operations in an area deemed nonattainment for a

specific pollutant. BACT is a process that is conducted in an area -- a pollutant specific process that is conducted for a project in an area that is achieving or is unclassified for the National Ambient Air Quality standards.

Q. But within a top down BACT -- not regular BACT, but top down BACT -- is LAER the first step in that process?

A. No. The first step in the BACT process is to evaluate the available controls. Should I generally go through the process again?

CHAIRMAN RUSSELL: Generally.

A. In general, Step 1 in the five step process which we're characterizing as a top down process is analyze the available control technologies for that pollutant; Step 2 would be to eliminate technically --

Q. (By Ms. Shropshire) I'm just looking here at Exhibit 1, Page B-5.

MR. REICH: Mr. Russell, and members of the Board, if it would help, we do have a chart that was stipulated to and also in. Right after Tab 20 is the five step BACT process illustrated. For information, we could put up that chart.

CHAIRMAN RUSSELL: You folks put it up

on your chart.

MR. REICH: Would you like us to do that again?

CHAIRMAN RUSSELL: It might be helpful since this is the top down BACT process.

MR. MARBLE: Page B-6, Exhibit 1.

Q. (By Ms. Shropshire) B-6 is the next page, Step 1. It says, "List as comprehensive LAER included." Can you explain that.

A. Again, identifying all control technologies. LAER means the Lowest Achievable Emission Rate. That wouldn't be something -- You wouldn't list that as a control technology. That would be an emission rate -- that is analyzed through the process. We certainly look at the -- As I've discussed in my testimony today and yesterday, that's part of the process, that we're going to, at some point in the process, look at what is the rate out there that's being achieved, the lowest rate out there that's being achieved. But that doesn't mean that that's BACT.

Q. Just in terms of this document, did you follow that? In terms of the lowest achievable -- In listing the control technologies, did you include the best -- or sorry -- the lowest

achievable or include LAER?

A. Ms. Shropshire, members of the Board, in listing all the available control technologies in Step 1, that is again project specific. We're going to look at what control technologies for a specific pollutant can we look at for this project. If you look, in parentheses, it does say LAER is included on Page B-6.

If you look at the discussion of what the first step is on a previous page, as you pointed me to, what you're looking at is you're looking at what are the available control technologies that are out there to achieve that maximum reduction.

In practice, it would seem to me that including in Step 1 the analysis of what is the best that's being achieved out there, that's not typically how it's practiced. We look at the available control technologies for that project, and then we eliminate them, and then we rank them.

Q. I'm sorry to interrupt. I'm just going to read. "Technologies required under Lowest Achievable Emission Rate (LAER) determinations are available for BACT purposes, and must also be included as control alternatives and usually

represent the top alternatives."

A. Okay. Yes. Those technologies that are associated with the LAER determination that would have been made for a project in a nonattainment area for that pollutant, those are certainly technologies that are evaluated. Again, the top technologies, all the top technologies are -- all technologies, including the top technologies, are included in that Step 1. And to the extent that a facility that's operating in a nonattainment area and is subject to LAER is incorporating that same technology, yes, that is certainly a technology that we're looking at.

Q. Do you know which plant has the lowest emission limit in the United States for PM10?

A. I believe that that was provided in the application, and I believe there is a River Hill facility, I think, that's permitted at 0.010 pounds per million Btu, and I would need to refer to the list. There is another one. The River Hill facility was not included in the application.

Q. Do you know what control technology they used?

A. It is my understanding through my own research that they are incorporating a fabric

filter baghouse.

Q. And other control technologies?

A. That's not my understanding. Based on the available information that I've reviewed, I believe they're incorporating a fabric filter baghouse to comply with that limit.

Q. Do you know if they have a condensible limit?

A. Ms. Shropshire, members of the Board, I would need to review the information to determine whether or not they do, that facility specifically.

Q. Why did you focus on condensibles in the BACT?

A. Ms. Shropshire, members of the Board, I conducted an analysis -- Well, the applicant provided an analysis of condensible emissions from this project. In fact, they conducted a comprehensive study of what we would expect for condensibles based on the precursor emissions, precursors condensible PM10 emissions, what would be left over after control.

Q. When you say "precursor," can you explain. What do you mean by that?

A. Condensible emissions are -- Condensible

particulate emissions are emissions that are in gaseous or vapor form as they pass through the control technologies; and then when they enter the atmosphere, they would condense into a particulate. So the precursor pollutants are those pollutants that when they're in the process or in the flue gas, they are a gaseous or vapor form, and then later they will condense. So they're precursors to the condensible particulate.

Q. Sorry to interrupt. Why did you focus on condensibles in your BACT?

A. Because there was an analysis provided for condensible emissions, and we have, as an agency, begun looking at condensible PM emissions through the BACT process -- I believe this is the second permit that we've conducted that analysis for. And so based on information provided in the application specific to this project, we had an understanding of what those condensible emissions would be, and therefore, I reviewed the analysis for BACT purposes.

Q. I think it was yesterday you were talking about emission factors for PM2.5, and you said that you couldn't find emission factors for any CFB in the country; is that correct?

A. Ms. Shropshire, members of the Board, I'm not aware of any direct PM2.5 emission factors for this project for this type of a process. In fact, I'm generally not aware of PM2.5 emission factors for any process.

Q. I guess one of my areas of confusion that I have is -- Let's just look on Exhibit 7, Page 40, where it's talking about control efficiencies. The permit has an actual rate in the permit, correct? Pounds. But this information is efficiencies. And where I'm having trouble is taking this 90 percent plus or minus -- who knows -- 80 percent plus or minus -- who knows what. It's confusing to me. We've got this dry FGD, and FFB, or ESP, and then these ballpark numbers.

And so in terms of the BACT process, which as I understand it, you look at control technologies, and then come up with a rate, is that correct, in the end?

A. Yes.

Q. How that permit limit -- It just seems to me that it's backwards, and I'm confused by that. How do you come up with a pounds rate when you've got these numbers that -- As a scientist,

when I look at this number -- 90 percent, 80 percent -- that's plus or minus who knows what. Those aren't very accurate numbers.

So how do you come up with a number as precise as the one you have in the permit?

A. Ms. Shropshire, members of the Board, these are generalized control efficiencies here. As we read into the record as part of my testimony, there isn't that much concrete information out there regarding the control of these precursor emissions to condensible PM for any of these control options.

Therefore, the information that was provided in the application, that ultimately resulted in a pound per million Btu heat input to the boiler, is based on this specific boiler, and is the best information that's available when considering those types of emissions, those precursor emissions, leading to the overall condensible -- and those are based on that overall condensible PM10 efficiency of approximately 90 percent.

Q. Is there some analysis that goes through, or is it some vendor's certificate that says, "This is how we come up with that emission

number"? It's just when you look at all of these plants across the country, they magically come up with the same number, and I just find that crazy.

A. Ms. Shropshire, members of the board, I don't think there is a magical process or number for this. What the vendor --

This is information coming from the vendor, as is stated in the application and in my summary, I believe. And so what is happening here is the vendor is analyzing what are the uncontrolled emissions from our boiler, using Powder River Basin coal, a dry FGD, followed by a fabric filter baghouse, and an ESP, what kind of reductions are we getting based on that uncontrolled number.

Q. So that final PM number, is that pounds? That rate, is that provided by the vendor, or is the efficiency number provided by the vendor?

A. The pounds per million Btu rate is provided by the vendor. We analyze that based on what we're seeing -- through the BACT process. If you look at Page 42 of that exhibit, that provides a summary of the precursor emissions or the constituents of the condensible PM10 emissions.

Q. And I guess that's the other part that's

confusing to me, because if you look at the condensibles -- which as I understand it are the part that are -- in terms of human health, the part where we're most concerned about. Ten years ago, EPA said, "Hey, guys. This stuff is bad for you. Let's focus on this." We need to pay attention to the 2.5, which seems to be synonymous with condensibles; is that correct?

A. As a person that lives and breathes the air out there, I am concerned with health effects. However, as a regulator, my basis for my decisions is on what the law requires.

Q. I appreciate that. In terms of why EPA started to focus on the 2.5 -- and I don't know. Is it fair to say that the 2.5 and condensibles are kind of the same thing? Is it fair to lump those together?

A. Ms. Shropshire, members of the Board, it's fair to say that my understanding, based on the information I've been able to verify, is that most of the condensible PM emissions are going to be in the size range of 2.5 microns or smaller.

Q. Then when we look at Exhibit 4, Page 5-48, and 5-49, for HF -- which is one of the main condensibles -- we're ranked eleventh in the

country; and for the other one, we're at the eighth. And so a lot of these -- There is plants here that were permitted in 2000.

And so I'm having trouble understanding how we're looking at the best technologies and that we can't do better than someplace in Texas.

A. Ms. Shropshire, members of the Board, you are correct that they do rank -- according to this table, SME's plant, permitted limit for the plant isn't the top control technology, or isn't the top emission rate, best emission rate.

However, it's generally well understood that when analyzing these pollutants specifically, there is a lot of unknowns. Again, it's specific to the fuel. You're not to get much sulphuric acid mist out of utilizing one fuel as you will another fuel. So you're looking at this project on a case-by-case basis, what is happening with this boiler, using this coal, using these controls.

And so it may not be the best, but for the purposes of BACT, it's the best that this facility, using that coal, can achieve. That is what BACT is.

Q. I'm not sure that the best in the

country is even on here, so -- there may be more. But the other thing that I don't understand is -- Just help me. When you looked at condensibles and BACT, or the BACT for condensibles, you looked at SO2 and filterables; is that correct?

A. Ms. Shropshire, members of the Board, what I looked at were the available control technologies for the precursor pollutants to condensible PM10; and as it turns out, those controls that are the best or top controls for the condensible precursors also are the same controls that were deemed BACT for SO2 and filterable PM10. So they're already employing those top controls for other pollutants, SO2 and filterable PM, and we're getting a co-benefit control, the top co-benefit control for these precursor emissions.

Q. And I'm not trying to disagree with you. But from the testimony that Mr. Taylor gave, and from my understanding, the baghouses aren't the most efficient way to reduce condensibles.

A. Ms. Shropshire, members of the Board, I'm not going to speak for Mr. Taylor. He speaks for himself.

My understanding of the controls that we looked at for this process is that the fabric

filter actually provides additional co-benefit control for H2SO4 and acid gases, which are major constituents of the condensible PM10; whereas the wet ESP doesn't have that same capability. Therefore, I deemed, or I agreed with the analysis that said these are the top control technologies. You're going to get that co-benefit control.

And the information provided in the application and my own independent research resulted -- or led me to the determination, or agreement with the determination that the fabric filter baghouse, the dry flue gas desulphurization unit followed by a fabric filter baghouse is the top control.

Q. From what you know now, do you believe that the wet ESP is the best technology to reduce condensibles?

A. Ms. Shropshire, members of the Board, no, that's not my conclusion at this time from my knowledge, based on the information that I've seen. In fact, I would believe that our determination is backed up by the most recent EPA permit, which stated that fabric filter control is the top control.

Q. For condensibles?

A. For filterable and condensible emissions.

Q. But just condensibles alone?

A. I would need to look back at the Deserit permit that is in evidence. However, it's my understanding that they deemed the fabric filter to be the top control in that case as well, and dismissed the use of a fabric filter followed by a wet ESP.

Q. So in your analysis, you never analyzed condensibles separately? You combined the two?

A. That's incorrect. We analyzed separately filterable PM10; and then in addition to that analysis, we analyzed condensible PM based on the control of the precursors leading to condensible PM.

Condensible PM is a little bit different, in that it's not a direct emission -- you're controlling the precursors to that pollutant -- versus the filterable is a filterable, solid, physically solid particle that's being collected by the fabric filter baghouse in this case. The condensibles are being controlled as a precursor. Does that make sense?

Q. I'm not sure.

A. When the precursors to condensible PM enter the atmosphere, they form a particulate.

Q. Right, or a liquid, or a solid?

A. A mist. They form a particulate. Once they enter the atmosphere and condense, they're considered a condensed particulate emission.

Q. Not particulate anymore?

A. To get control of that, so that that doesn't happen, so that those precursors don't enter the atmosphere, you control the precursor itself.

Q. So sulphuric acid. You look at how you would control sulphuric acid in that control technology?

A. Yes. Well, essentially in this case, a flue gas desulphurization unit, and that in combination with the fabric filter baghouse we deem is the top flue gas desulphurization; dry flue gas desulphurization unit, is the top control in SO2. SO2 in the flue gas stream is going to ultimately lead to SO3, H2SO4. You're going to get some of those emissions. And those are precursors to condensible PM. So we are employing the top control technology for the precursor itself.

Q. So maybe I'll ask it a different way. If you had done it for, let's say, HF and sulphuric acid directly, would you have come up with a different result?

A. Ms. Shropshire, members of the Board, we did that analysis for H2SO4, acid gases, and acid gases including HCL and HF, which are the primary acid gases. We analyzed available control technologies for those pollutants which happened to be precursors to condensible PM, and the result was that after listing the available control technologies and ranking those control technologies for those pollutants, it so happens that those are already being employed as BACT for SO2 and filterable PM.

Q. So the results for BACT for sulphur and acid gas would be identical to doing one for the precursors? I'm just making sure that I'm not confusing those two things.

A. Ms. Shropshire, would you ask that question again?

Q. I guess where I'm confused is you talk about the precursors, using the precursors instead of directly doing for condensibles, or are you saying that those are the same thing?

A. Ms. Shropshire, members of the Board, it might be clearer if I state that you can't -- The condensible PM is not particulate matter when it's in the process, so I can't imagine a control technology that's going to get the condensed particulate matter because it's not going to be condensed particulate matter until it exits the stack.

Therefore, what we're trying to do is we're trying to provide the best control of those pollutants that when prior to leaving the stack are -- we're trying to -- they're precursors. They're ultimately going to condense into particulate matter. So we're controlling those precursors to avoid getting condensed particulate matter.

Q. I guess that's why when I think of condensible, it's not condensed yet. And so condensible is the same as a precursor; is that correct?

A. Condensible --

Q. Something that's not condensed yet.

A. Yes.

Q. And those precursors were SO2 or -- what were the precursors exactly?

A. The primary precursors, based on the information that I have available to me, the primary precursors for this process are H2SO4 or sulphuric acid mist, hydrochloric acid gas emissions, hydrofluoric acid emissions, trace metals, I believe VOC's. We can look at the table.

Q. But you did your BACT for SO2 and the filterable part for the condensibles? That's the part that I'm confused about.

A. Ms. Shropshire, members of the Board, I'll try to take a step back and provide an answer that is as clear -- This is as clear as I can state it, or I'll try.

We conducted a BACT analysis for the precursors of condensible PM. So we went through Step 1. We evaluated -- or I reviewed a BACT analysis. In Step 1, we identified the available control technologies for these precursor emissions. In Step 2, we eliminated any technically infeasible options. In Step 3, we ranked the remaining control efficiencies for those precursors to condensible PM, and the top control technologies for those precursors were those controls that were already deemed BACT for

S2 and PM10. Therefore, those control technologies constitute BACT. There is no further analysis required.

EXAMINATION

BY CHAIRMAN RUSSELL:

Q. Eric, did you have an opportunity to review the Deserit application prior to making the Department's final decision?

A. No.

MS. SHROPSHIRE: I wanted to read one other thing that or comment or I have a question about.

RE-EXAMINATION

BY MS. SHROPSHIRE:

Q. So under Tab 6, Page 20652, I think the third one in, it says, "Notwithstanding the issues and uncertainties related to condensible PM, EPA encourages states to identify measures for reducing condensible PM emissions, particularly where these emissions are deemed significant contributions to the control strategy needed for expeditious attainment. We wish to clarify that in order to take credit in the SIP for reduction

Q. Why do you and SME come up with different numbers?

A. I can't speak for SME. And in particular, this email is not something that I had available to me in my review. I don't know why they chose to propose a limit of 0.015. Through the BACT process, I determined that 0.015 pounds per million Btu filterable particulate does not constitute BACT for this project.

Q. Is PM2.5 regulated?

A. Yes.

MS. SHROPSHIRE: I think I'll stop there.

CHAIRMAN RUSSELL: Next.

EXAMINATION

BY MR. ROSSBACH:

Q. Let me take a few minutes here, or maybe more than a few minutes, depending on how it goes.

MR. ROSSBACH: David, could you give Mr. Merchant the stipulated -- this is the joint prehearing memorandum.

Q. (By Mr. Rossbach) And I'd like to start with Page 4 of the Petitioners' factual contentions. But let me begin by saying first:

I've got a lot of questions, Eric, and I really appreciate your saying, "Members of the Board, but can we pass on that a little bit. I think it's very respectful, and the training you've had as a witness is excellent in that regard. But so we can kind of move along, because saying my name over and over again is going -- maybe that's to slow me down. I don't know. But let's just kind of go through the questions.

A. Certainly Mr. Rossbach, Mr. Chairman.

Q. Just have her take them all out of the record anyways. I'd like to -- Because I'm German and kind of methodical, I'd like to and want to try to understand this and kind of get it in context.

I'd like to go through the Petitioners' factual contentions. Yesterday Mr. Rusoff spent a lot of time telling us about you telling us, asking you questions, that let us know what your qualifications are, and the numbers of permits you've reviewed, and the number of training sessions you've been to, and your familiarity with the federal record and things like that. So hopefully we can kind of go through this and maybe we can move it.

Let's just start -- I'm going to start at the beginning, No. 1. "Reducing emissions of PM2.5 is a major public health concern." Do you agree with that?

A. Yes.

Q. And do you agree with the statement that is quoted there from the Federal Register, or do you have any reason to disagree with the EPA statement that, "Decreasing PM2.5 in the ambient air by only .5 micrograms per cubic meter can prevent as many as 25 to 50 premature deaths each year"? Any reason to disagree with that?

A. I have no reason to disagree with that.

Q. Then looking at two, "Microscopic particles in the PM2.5 range are small enough to lodge deep into the lungs. Even short term exposure to PM2.5 is known to cause serious respiratory illnesses, including asthma, cardiovascular illness, heart attack, premature death." Do you agree with that generally, as far as you know?

A. I have no reason to disagree with that.

Q. And do you also agree that, "Those particularly sensitive to PM2.5 exposure include children, older adults, and people with heart and

lung disease"?

A. I have no reason to disagree with that.

Q. Getting into a little more technical area on No. 3, it says, "PM2.5 is produced chiefly by combustion processes and by atmospheric reaction to various gaseous pollutants, and they can remain suspended in the atmosphere for days to weeks, and be transported many thousands of kilometers." Is that generally consistent with your understanding?

A. That makes sense to me, yes.

Q. Looking at No. 4, do you agree that, "The Highwood, HGS, Highwood Generating Station will be a major source of PM2.5 emissions, and that the CFB boiler alone is anticipated to emit 299 tons of PM10 each year. Given that SME is anticipated to achieve over 99 percent control efficiency for filterable particulates in the larger PM10 size range, and 80 to 90 percent control efficiency for condensible particulate in the larger PM10 size range, the vast majority of the HGS uncontrolled PM emissions will be in the smaller PM2.5 size range"? Do you agree with that generally?

A. The term "major source" needs to be put

in context here. I have no way of knowing, based on the lack of emission factors, reliable source test methods, whether or not HGS is actually a major source of PM2.5. I analyzed PM10 as a surrogate for PM2.5.

Q. I understand what -- So let me ask you that. You had available to you the boiler manufacturer's data, did you not, as to what would be emitted from the normal boiler processes for the Alstom boiler that was going to be used at this plant?

A. In respect to PM10 emissions, I have what they determined would be the uncontrolled emission rate for PM10.

Q. They didn't provide you, or they were not able to provide you with a rate for 2.5?

A. The applicant did not provide me with that information, and I am unable to get that information on my own.

Q. Did you ask the applicant to request from Alstom what their 2.5 uncontrolled emission rate would be burning this particular coal in this particular application?

A. I'm not certain if that's in the record. My recollection is that I have had conversations

with their engineer regarding what would be anticipated for PM2.5 emissions. I don't know that, I don't know when that happened, in what context that question would have been asked, other than probably than through review of the application.

Q. You were never provided that information from the boiler manufacturer indirectly and then through SME about what their uncontrolled 2.5 particulate would be?

A. That's correct. I was never provided that information.

Q. And you never followed through? If it was asked for, it was never followed through to ensure that you had it available to you; is that correct?

A. It was not provided to me, and I used a surrogate analysis.

Q. I understand that, but the question I'm asking you is: Did you ever follow through to try to find out what 2.5 emissions would be expected, uncontrolled emissions would be expected from the Alstom boiler that Bison Engineering was proposing for this project?

A. Mr. Rossbach, as I testified just

previously, it's my recollection that those questions were asked at some point during the process, but that we relied, in fall back because that information was not available -- at least that was what reported to me, that that information was not available -- I relied on the surrogate analysis. I have no way of -- If I don't have the information, I can't use it.

Q. But can't you say that, "The application is incomplete because I want that information"? You could have done that, couldn't you?

A. That could have been done. To be consistent -- Let me follow up. To be consistent with how these emissions are typically analyzed, I used guidance that's out there and available; and therefore, it was my determination it would be inappropriate to call the applicant deficient for that reason.

Q. But it was something that you could have done if you wanted to? You've asked for additional information here, and at one point you even asked them to do an -- conduct a particulate matter with an aerodynamic diameter less than 2.5 microns ambient impact analysis. You asked them to do that, didn't you?

A. Yes, based on PM10 emissions.

Q. Right. But you asked them to do an additional analysis for 2.5, an ambient impact analysis, did you not?

A. Yes.

Q. So you could have asked them, "Look. We want to know what the 2.5 emissions, uncontrolled emissions from this boiler are, because NAAQS -- we now have a NAAQS for 2.5. It's been in place for ten years. We're looking at -- The EPA is looking at it. We'd like to know what this would be"? You could have done that, couldn't you?

A. I could have done that.

Q. So let's go back to the rest of this question. "The CFB boiler is anticipated to emit 299 tons of PM10 each year;" is that correct?

A. PM10 filterable plus condensible.

Q. 299 tons approximately; is that correct?

A. Yes.

Q. Would you then look at the next sentence here, and it says, "Given that SME is anticipated to achieve over 99 percent control efficiency for filterable particulate in the larger PM10 size range, and 80 to 90 percent control efficiency for condensible particulate in the larger PM size

range, the vast majority of the HGS uncontrolled PM emissions will be in the smaller PM2.5 size range;" do you agree with that?

A. I would agree with that statement.

Q. So now let's go to No. 5. No. 5 is basically a citation from the 70 Federal Reg. Do you have any reason to disagree with that statement that the obligation to implement PSD was triggered upon the effective date of the NAAQS for PM2.5?

A. I'm sorry, Mr. Rossbach. Could you point me to where you were again?

Q. I'm on No. 5. I'm just going down one by one. No. 5. And it's referring to the statement in the Federal Register. Do you have any reason to agree, disagree, with the statement made there by EPA that, "The obligation to implement PSD was triggered upon the effective date of the NAAQS for PM2.5"?

A. That would be when PM2.5 became a regulated -- a pollutant subject to regulation.

Q. Right. And the obligation to implement PSD was triggered upon that effective date?

A. That's correct.

Q. Then looking at No. 6, "The primary

health based PM2.5 NAAQS became effective over ten years ago, and the 24 hour NAAQS have since been revised to nearly twice as stringent in response to extensive data regarding the health impacts regarding PM2.5." Do you agree or disagree with that?

A. I agree with that.

Q. Now, No. 7. "While the NAAQS has been in effect for PM2.5 for over a decade, DEQ did not require SME to undertake a BACT for PM2.5 during the permitting process for HGS;" is that true?

A. That is not true.

Q. Well, I understand the surrogate, but did you do a specific 2.5 where you set up a matrix, and looked at the control technologies specific for 2.5? You did not do that, did you?

A. That analysis is not technically possible at this time.

Q. Well, we'll come to that in a minute. But you did not do that, is the answer to the question?

A. I did not directly require a PM2.5 analysis without using a surrogate.

Q. Look at No. 8. "Technologies for control of PM2.5 emissions, both filterable and

condensible --" we'll take out the "readily available" -- "are available" -- and I'll take out "widespread" -- "use. Such technologies include membrane bags which can reliably capture filterable particulate down to .5 to .3 microns."

You heard the testimony of Mr. Taylor. Do you have any reason to disagree with the testimony of Mr. Taylor yesterday with regard to the availability of membrane bags and the filterable efficiency for those bags? Do you have any reason to disagree with him?

A. I'm not aware of the membrane bag technology through any BACT analysis that I've seen. And the fabric filter is also capable of -- The fabric filter, as analyzed through our process, is also capable of controlling filterable particulate down to submicron size.

Q. Do you know what the relative efficiency of membrane bags versus teflon bags is at submicron size?

A. I do not know that information.

Q. Will you defer to Mr. Taylor with regard to those particular technical issues?

A. (No response)

Q. Would you defer to his expertise in

terms of those particular technical issues?

A. Would I defer to his --

Q. Would you concede he has expertise in these areas? Do you have any reason to disagree with his expertise?

A. No, I don't have any reason to disagree with that.

Q. And then on the second half of that paragraph, it talks about, "Wet electrostatic precipitators can achieve up to 99 percent control of particulate in the PM2.5 size range." Do you agree with that?

A. I'm very sorry. Where are we again?

Q. Turning on the next page, Page 6, and at the top, it's a continuation of the same Paragraph 8, Paragraph 8 that we were just talking about. Do you see that? Do you agree with the clause, "Wet electrostatic precipitators (ESP) can achieve up to 99 percent control of particulate in the PM2.5 size range"? Do you agree with that, or any reason to disagree with that?

A. My reasoning for -- I can't say that that's a true statement, because I don't think that it's generally common knowledge to know what uncontrolled emissions of PM2.5, specifically

PM2.5 are for this boiler. If you don't know what uncontrolled emissions are, you cannot make that type of a determination.

Q. But the question -- I'm not asking the question in terms of this particular boiler. I'm asking the question generally. Do you agree that there is information available to you to say that there are wet electrostatic precipitators which can achieve up to 99 percent control of particulate in the PM2.5 size range?

A. I disagree with that.

Q. You don't agree that there is information or that -- Do you agree -- So you're disagreeing with Mr. Taylor about that technology?

A. I'm disagreeing that there is -- I've not seen that information. That's what I'm saying.

Q. That's fine. And No. 9 I assume is correct that you did not consider using membrane bags?

A. That's correct.

Q. And No. 10, I think we've had some discussion about. You did consider wet ESP as a part of a combination with wet FGD? You did consider wet ESP as a technology as a part in

combination for control of condensibles; is that correct?

A. That's correct, and also stand alone for filterable PM10.

Q. I didn't see that. Maybe I missed that.

A. I can point you to the permit location, if you'd like.

Q. That's fine. So where did you get the information about the efficiency of wet ESP? Where did that come from in that combination?

A. That would have been provided by the applicant.

Q. And did you know which particular vendor or which particular wet ESP manufacturer was being utilized to do that analysis?

A. No.

Q. That particular information was not provided as part of the permit application, where they got that information?

A. To the best of my recollection, they did not provide a vendor name for their specific technology proposed or analyzed.

Q. Let me step back one simplistic question. Exhibit 4 in this case is the application, I think. Do you get more than just

that application, or is that all you get? Do you get like sort of a background box of appendices where they got this information, or the source material for how they decided that they were going to get this level of efficiency? Do you get anything more than that, or do you just get the little application?

A. The application itself -- What's provided in Exhibit 4 is small pieces of the application. The application itself is somewhere around 500 pages long, including appendices, modeling analyses, coal specifications. There were also DVD's provided for a coal test burn that took place. There was lots of information.

Q. I assumed that. That's what I -- because when you say, "They provided us with information about the efficiency of that particular combination technology," you had something more than just that little chart?

A. Yes.

Q. So combination technologies including wet ESP was something that was provided to you as an alternative by SME; is that correct? In their own BACT; is that right? The wet FGD followed by the wet ESP was one of the technologies, which was

a combination technology, which was provided to you as a part of the BACT that Bison or the people working for Bison did and submitted to you; is that correct?

A. For condensible PM, yes.

Q. And wet ESP standing alone was also considered as a part of the filterable?

A. That's correct.

Q. So Mr. Taylor yesterday proposed a baghouse plus wet ESP filterable bag technology followed by a wet ESP. That's another combination technology, not unlike the combination technology that was part of the BACT given to you by Bison; is that correct? It's another combination technology; is that correct?

A. That is correct.

Q. Let's skip No. 11 and No. 12 because there is a lot of information in the permit that talks about some of the same stuff; and then we'll skip No. 13, No. 14, No. 15. I think they've been talked about by Miss --

No. 17. This goes to the Seitz memo that was part of your testimony yesterday. I'll give you a chance to read through that, and I'm going to just ask one question.

MR. REICH: What number are we on?

MR. ROSSBACH: I'm on No. 17. I think we've dealt with those plenty, the Forest Service and all that other stuff.

Q. (By Mr. Rossbach) Do you see No, 17, Eric? Have you had a chance to read that?

A. Yes.

Q. That's the memo that Mr. Seitz sort of set out the concerns that they had in 1997 about doing a PM2.5 BACT, so they basically authorized the states as the delegated Clean Air Act agency to use the PM10 surrogate; is that correct?

A. That's correct.

Q. That's where that came from?

A. That's correct.

Q. And then No. 18. This so-called Seitz memo was never adopted through notice and comment federal rulemaking; is that correct?

A. That is correct.

Q. And do you agree that -- Look at No. 19, and read that through for me, if you would.

A. (Examines document) Out loud?

Q. No, just read through it. I don't want to ask you a question without giving you a chance to look at it.

A. (Examines document)

Q. So the memo does provide that -- the statements in that memo do not bind the state, and local governments, and public as a matter of law; is that correct?

A. That is correct.

Q. The Seitz memo doesn't bind you to using PM10 as a surrogate, does it?

A. It does not.

Q. It doesn't require you that -- the only way you can do a BACT for a power plant is by using PM10 as a surrogate; is that right? You could have come up with another method if you felt that you, as the delegated agency, wanted to do a different way of looking at it?

A. That's correct.

Q. So you had a choice then about whether to use PM10? You weren't required to use PM10 as a surrogate; is that right?

A. That's correct.

Q. Let's look at No. 20. "The Seitz memo's guidance to rely on BACT analysis for PM10 --" and I'll add as a surrogate -- "does not ensure maximum achievable reductions in emissions of PM2.5;" do you agree with that?

A. Yes.

Q. Then look at No. 21, if you would, and read through that for a minute briefly.

A. (Complies)

Q. We'll take it one part at a time. Do you agree that a control technology that is deemed to be BACT for PM10 may not be BACT for PM2.5?

A. I think we have to put this in context here. I think that that's --

Q. Let's start with answer the question, and then we'll put it in context.

MR. REICH: I object. I think he should be entitled to answer questions.

MR. ROSSBACH: He can answer my question, which is yes or no, and then he can -- I'm not going cut him off from explaining, or you can -- Mr. Russell would have a chance --

Q. (By Mr. Rossbach) Eric, yes or no.

A. Yes.

Q. And then, "In general, control technologies that are highly effective at controlling PM10 will achieve lesser control efficiencies for PM2.5;" do you agree with that?

A. I cannot say whether or not that's true, no.

Q. And then the last question is, "At the same time, some particulate matter control such as membrane bags and wet ESP are better than others -- are better than others at capturing smaller particles." I think we've already addressed that. Yes or no?

A. I don't have that information.

Q. So going back to Mr. Reich's concern, I want to give you a chance to put it in context.

A. What I was saying there -- "A control technology that is deemed to be BACT for PM10 may not be BACT for PM2.5" -- and I generally answered yes.

However, the BACT process requires certain things. I don't think that the BACT -- I think there are technical problems right now that still exist, some of which are highlighted in the Seitz memo, to conducting a PM2.5 BACT. So I don't know that you can make that statement. We have to know what uncontrolled PM2.5 emissions are in order to conduct a BACT analysis, direct PM2.5 emissions. We don't have that ability right now.

Q. Well, I heard Mr. Taylor say that you could have asked the boiler manufacturer what the uncontrolled emissions were for that particular

boiler, and that if they didn't know, in order to sell the boiler, they do a test burn, they do the lab work, they try to tell you what that number was so that you would buy that from them. So if you had gone to SME and demanded that you knew what the 2.5 was, SME would have gotten it for you; don't you think that's true?

A. No, I don't. In general, I think that one of the problems here that we're talking about is: There is no promulgated and approved direct PM2.5 emissions monitoring test, so I don't know how you would get that information. And in addition -- and I'll just put this for my purposes here, for answering your question -- without Mr. Taylor providing Alstom's spec sheet which shows a PM2.5 direct emission factor, I believe that that's hearsay.

Q. Well --

A. I can't rely on that. Maybe I used the wrong term.

Q. Calls for a legal conclusion.

A. Calls for a legal conclusion. I can't say that.

Q. I understand what your concern is. All I heard was Mr. Taylor yesterday say that as a

representative of a boiler manufacturer, if someone had come to him and said, "We want to buy your boiler, and we want to know what the uncontrolled emissions are," they would have found out. That's all I'm following up on, what he said. And so I'm just wondering if you had wanted and you had insisted that you find out what the 2.5 was, they would have gotten you some information, wouldn't they? They would have told you, "Well, we're not certain about it, but we believe it's about this, because this is how we came about it." Don't you think they would have done that if you would have asked them?

A. I think your question has a lot of speculation in it. I don't know that that's true.

Q. Well, at least Mr. Taylor, when he was working for a boiler manufacturer, he would have tried to provide you that; isn't that what he said yesterday?

A. That's what he said.

Q. Do you agree with the first sentence of No. 22, "PM2.5 is significantly more toxic in smaller concentrations than PM10"?

A. I believe that's depending on what the PM10 is made of. I guess there could be some

toxic characteristic of a specific particle in the PM10 range. But given what I've read before and the EPA studies, and other studies, generally PM2.5 is more hazardous than PM10.

Q. Then look at No. 23. And as somebody who does BACT, maybe you can tell me whether you agree or disagree with No. 23. "Because PM2.5 is more dangerous than PM10, technologies that achieve higher control efficiencies for PM2.5 or its precursors may be considered cost effective in a BACT analysis for PM2.5, whereas in a BACT analysis for PM10, the same technologies would be considered unreasonably expensive." Do you agree with that?

A. Again, based on the information that I have available to me, I don't think that that analysis can be done at this point.

Q. Well --

A. At least in a defensible manner.

Q. I understand. Let's skip ahead to No. 25. No. 26. This is made of record. It has to do with the Federal Register that was brought to us yesterday. "As EPA knowledge in 2005, no new regulations are required to conduct BACT analysis for PM2.5;" do you agree with that?

A. Are you on No. 25 here?

Q. 26. Let's go back to No. 25. Let's start with No. 25. Do you agree that in November 2005, EPA announced that concerns raised in the Seitz memo had largely been resolved, and on this basis, the agency proposed new implementation rules with respect to 2.5;" do you agree with that?

A. That's a statement, yes, out of that document, the Federal Register.

MR. REICH: I'm just going to object, Mr. Rossbach. We should have the right to read other pertinent provisions of that regulation, because that doesn't --

MR. ROSSBACH: But the regulation is record.

MR. REICH: You're taking pieces of it and cross-examining on those pieces, and it's not fair -- the entire context. That's all.

CHAIRMAN RUSSELL: I tend to agree, Bill, because I'm reading parts of that same document, both of the CFR's, and I can pull portions up that state -- and I don't want to act like an advocate for any party, but it talks about -- in the 2005 record, it talks about PSD coming

later.

MR. ROSSBACH: That's fine.

CHAIRMAN RUSSELL: Let's just be really careful. I'm sure you feel you are.

MR. ROSSBACH: I'm just going through trying to get straight what we agree or don't agree with. That's all. Because I'm not sure what we agree or don't agree with after hearing the testimony so far.

Q. (By Mr. Rossbach) Do you agree with the statement then that out of the -- Do you have any reason to disagree that the 1997 guidance stated that sources would be allowed to use implementation of PM10 as a surrogate for NSR requirements until certain difficulties were resolved, primarily the lack of tools to calculate emissions of PM2.5 and related precursors --" I think you've talked about that -- "the lack of adequate modeling techniques to project ambient impacts and the lack of 2.5 monitoring. As discussed in this preamble, those difficulties have been resolved in most respects, and where they have not been, the proposal contains appropriate provisions to account for it."

I'm finishing up on No. 25. This is a

quote from the Federal Reg. You were aware of that Federal Register statement guidance by EPA?

A. Yes.

Q. And then in No. 26, are you aware that, "The EPA acknowledged in 2005 that no new regulations were required to conduct a BACT analysis for PM2.5. The requirements applicable to New Source Reviews and SIP for the obligation to subject sources to NSR permitting for PM2.5, direct emissions are codified in the existing federal regulation, and can be implemented without specific regulatory changes." Do you agree with that as stated?

MR. REICH: Same objection.

Q. (By Mr. Rossbach) Any reason to disagree with that coming from the Federal Register?

A. That's what it says.

Q. Emission factors that -- Let's just get a clarification, go back. An emission factor is like a published statement that provides some guidance based upon lots and lots of testing of different comparable boilers to come up with an assumption about how much of a particular uncontrolled particulate will come out of a boiler

of a certain technology; is that how that works?

A. It's a tool used to estimate emissions, yes, based on --

Q. It's an estimate based upon lots of data gathered; is that correct?

A. That's correct.

Q. But as I understand it, you also depend upon the manufacturers to get specific technology information about the particular technologies that are proposed on a case-by-case basis; isn't that true?

A. Yes. I think that the ideal emission factor would be one that is based on the unit that you're analyzing, whereas a generally published emission factor might be just a best guess, best estimate.

Q. So obviously the best thing that you could do is get the specific data from the boiler, and the type of coal that they were going to burn; is that true?

A. That would be the best emission factor, yes.

Q. So when you said -- So what I was confused about yesterday, when you said there was no published emission factor for 2.5, it's just

that there hadn't been enough data gathered yet, or a consensus about what that would be; is that correct?

A. I'm not aware of a published emission factor for this type of unit, yes.

Q. I understand that. It just hasn't gotten there yet; is that correct? At some point, there will be a published emission factor?

A. That would be my hope and assumption, yes.

Q. But you don't need an emission factor, because you could -- at a specific site, if they had provided you with 2.5, you wouldn't have gone to an emission factor, you would have used what they gave you; isn't that true?

A. Had I had a reliable way of estimating PM2.5 emissions, I believe that I could have conducted a BACT analysis specific to PM2.5.

Q. Looking at No. 28, maybe we can take a minute because it's a long one there, and as somebody who is not as familiar with these test methods as maybe you are. Did you look at that for me? Have you had a chance?

A. For the record, I'm just going to state at the outset here: When talking about

conditional test methods and referenced methods, I'm aware of what they are, and what they're intended to be used for. I'm not a compliance officer. I don't have any stack testing experience. My experience would just be based on things that I've analyzed. So I can't speak to the test methods themselves.

Q. That's fine. Are you aware that the EPA has developed three different test methods for measuring condensible particulate emissions?

A. I'm aware that there are conditional test methods available.

Q. That's fine.

A. As well as Promulgated Test Method 202 for condensibles, which has been shown to have some problems.

Q. Do you know the efficiency of the fabric filter for controlling 2.5? Is that something that a manufacturer of a fabric filter would be able to provide you with?

A. Again, I'll just state: Based on the information I've had available to me, you would need to know what the uncontrolled emissions going into that baghouse were prior to having any understanding of what the control efficiency would

be. And I don't have that information available.

Q. I'm not talking about a particular component of it. You can't tell by the nature of the materials and the function -- Doesn't a vendor tell you what they think the efficiency of their particular product is going to be for particular chemicals, particles, whatever?

A. They don't tell me what -- and to the best of my knowledge, they don't tell the consultant either, what the control efficiency is for PM2.5. Now, you're talking about the material. Let's also understand that with a fabric filter, you're getting particulate control through the filter cake build-up on the bag. So I don't know --

Q. But the overall functioning of that particular technology, isn't that something that the manufacturer is going to want to promote to be able to sell his product? "Ours is more efficient than our competitor's." Somewhere that information is available, isn't it?

A. Not to the best of my knowledge, no, it's not available.

Q. Well, that's fine. How does SME decide whether they're going to buy Company ABC's product

versus Company XYZ's product? How do they decide which one, other than cost? Is there some other efficiency that they look at? Somebody who comes to a plant, comes to their office, and says, "Here. Ours is better than XYZ's because we can control sulphuric acid better," or "We can control, because of the particular weave, or the particular fabric material, or the way that we put the teflon into the material"?

You said to us that the teflon is more efficient. Is it more efficient at 2.5, or only at ten, or can we find that out?

A. I wasn't part of SME's development plan for this permit. I reviewed the information pertinent to this project from a control and emission standpoint, based on the information available and what the law says.

Q. But that's information -- Have you ever tried to get that information? Have you ever asked them, "How do you know it's going to work?" Don't they have to depend upon a manufacturer telling them, "We're going to get this efficiency," for them to do their BACT? Don't they have to depend upon somebody telling them --

A. I think that I stated yesterday that

part of the issue here is that we rely on the application, because they have lots of time to evaluate this -- as you've just discussed -- and I've got a period of time which is significantly shorter than that to evaluate it.

So I need to take information that I have available to me through the application, and some of my own research, certainly my own research to verify the information and that kind of thing that's provided to me. But I don't know -- I can't -- I can tell you with a high level of confidence that if I called Alstom Boilers and asked for that emission factor, it would not be given to me, either because it's not available, or because it's not something that they want to share. I don't know. It's all speculation.

Q. I understand. But somebody someplace in the chain of things had to make a decision as to whether to use an XYZ bag or an ABC bag, and that has to be based upon specifications; don't you think that would be likely?

A. That's very likely. I don't know that that would be something that they had for PM2.5. I just don't know that. I don't know that.

Q. I understand. I'm not accusing you of

anything. I'm just trying to find out what you did know, and what you could have known if you would have asked them for it. Presumably someplace in this had this information for them to be making these decisions. I just heard what Mr. Taylor said he would have provided as a vendor, and I'm trying to find out what they told you. That's all.

A. They did not tell me that. They did not give me that information.

Q. So going back a little bit to the -- let me ask you one other thing. Mr. Rusoff asked you about the use of an emission standard for condensibles; is that correct? Do you remember that discussion about that that was something that EPA had suggested, that you didn't need to impose a condensible limit until 2011 or something like that? Do you remember that?

A. Yes.

Q. SME asked you to not have a condensible limit; isn't that true?

A. That's correct.

Q. But you guys decided that was something that you felt was appropriate to have at this time; is that correct?

A. That's correct.

Q. And you felt that there were the tools available at that time to impose those kind of limits and to be able to monitor their compliance with them prior to 2011; isn't that correct?

A. That's correct. Based on information included in the application, we felt like we had the information necessary to estimate and limit condensible PM emissions based on precursor pollutants.

Q. So just let me understand it, and sort of break this down a little bit. Essentially you had a choice? You had a choice to either impose a condensible limit or not, and EPA told you that you have a choice? They were recommending to you not to include it, and SME asked you not to include it, but in that instance you decided to go forward and include it; isn't that true?

A. That is true.

Q. It's a different situation with PM2.5. EPA didn't tell you you had to use the surrogate anymore. In fact, the 2005 Federal Register suggested that most of the problems with 2.5 had been resolved. But in that instance, you chose to do what SME wanted; is that correct?

MR. REICH: Objection to your characterization of that question. It doesn't say that.

A. There is a difference between -- There is a big difference there in your statement, and that is: I believed through the application that I had enough information to analyze and limit condensible particulate matter. I do not have, and do not believe, and it was not provided to me any information regarding direct PM2.5 emissions. Therefore, I don't have that component. How can I directly regulate PM2.5 in a defensible manner? I could make something up, I guess, but that would not be defensible.

Q. (By Mr. Rossbach) You could have asked them for that information, too, couldn't you? We already had said that?

A. Again, to the best of my recollection, that was part of a conversation at some point during the process, but absent that information, I relied on the defensible surrogate approach that is suggested by EPA.

Q. Right. But what we have here is: You asked for it; they didn't give it to you; and you were satisfied with that for some reason. And we

don't have a record of why they denied giving you that information. All we know is they didn't give you that information, and you let it go. And you had a choice to demand that information and you didn't. You had a choice to make them comply with a condensible limit, and you did, and I applaud you for that. I'm thrilled that you did that.

But I wonder why you didn't just go and say, "Okay. We've had ten years of NAAQS. We know that 2.5 is much more hazardous. We know that the PM10 surrogate doesn't get all -- doesn't really tell us how much 2.5 is getting out there," and you didn't ask them and insist that they have -- that they provide you with that information. Why is that?

MR. REICH: Objection. The question assumes a fact not in existence, which is that SME denied or the boiler denied giving the information. He did not testify to that.

Q. (By Mr. Rossbach) You didn't get the information, and you didn't ask for it, you didn't insist on it?

A. Based on my experience in going back many years and analyzing many projects, it's my understanding that the EPA policy is that using a

surrogate is an acceptable and defendable process which is used by every state, by EPA, by everyone who is in this business. That is an acceptable methodology. Therefore, in the absence of that information being provided to me through the application process, I relied on a process which is defensible and appropriate by all standards.

Q. But it wasn't a required process?

A. It was not a required process.

Q. Just to kind of follow up. And I don't remember. With the October 3rd comment sheet that you wrote.

A. The draft.

MS. DILLEN: I believe it's Exhibit H.

Q. (By Mr. Rossbach) Do you have that, Eric?

A. I do.

Q. Let's look at Page 3. Do you see Page 3?

A. Yes.

Q. I'm looking at No. 9. Do you see that?

A. Item 9 on Page 3, yes.

Q. Item 9, yes. So after you did the analysis of the permit application, one of the things that you were going to insist on is that

SME/HGS must provide manufacturer's specifications or other appropriate information indicating that any proposed baghouse and emission rates of 0.005 grams per -- I don't know what TCH is.

A. Grains per dry standard cubic foot.

Q. And 0.01 Gr. per DSCF KCF achievable. So at least in that instance, you felt you had the ability to insist that they provide manufacturer's specifications for emission rates, didn't you?

CHAIRMAN RUSSELL: Does anyone have a background in stoic geometry? Do you know what those equate to in the same units that we're dealing with?

MR. ROSSBACH: No.

CHAIRMAN RUSSELL: Do you know what they equate to?

MS. SHROPSHIRE: What is DSCF?

THE WITNESS: Dry standard cubic foot. So that's a relatively simple --

CHAIRMAN RUSSELL: So someone needs to calculate --

MS. SHROPSHIRE: Actually it's a number, grains, particle --

MR. ROSSBACH: It's not relevant to my question.

MS. SHROPSHIRE: Number per volume.

CHAIRMAN RUSSELL: It could be very relevant because of the efficiencies of a baghouse to control the dust coming off the conveyor belt.

MR. ROSSBACH: That's a very good point.

MS. SHROPSHIRE: So the concentration basically --

Q. (By Mr. Rossbach) I guess my question, Eric, is: At least in this instance, you felt that it was in your power and authority to insist that they provide you with manufacturing specifications for those emission rates; isn't that true?

A. Not for PM2.5.

Q. Well, you asked them for emission rates?

A. Yes.

Q. You felt it was within your authority to ask for emission rates?

A. Oh, absolutely.

MR. ROSSBACH: I don't have any other questions.

MR. REICH: Mr. Chair, just before we break, if Mr. Rossbach has no further questions, I would ask that either a Board member or one of Counsel be allowed to go through the State and

SME's contentions, so this is a fair proceeding, because Mr. Rossbach has spent the last hour cross-examining Mr. Merchant only on the unagreed contentions of Petitioners, and it's entirely unfair that you have a one-sided presentation of the Petitioners' case through Mr. Merchant without an opportunity both to cross-examine Mr. Merchant on our contentions, as well as perhaps Mr. Taylor up --

MR. ROSSBACH: Can I respond?

CHAIRMAN RUSSELL: I'm thinking that you could, but I wonder if --

MR. ROSSBACH: But he hasn't even started his case. He can do with his case whatever wants to.

CHAIRMAN RUSSELL: Maybe it would be more appropriate for you to go through DEQ and SME's with your witness, and I will designate someone on the Board to go through those.

MR. REICH: I'd happy to. I would also point out that MEIC had already finished its case, and now we're doing MEIC's case through Mr. Merchant. I just don't think it's a fair process.

CHAIRMAN RUSSELL: Duly noted. If you want to file anything on that, you certainly

could.

MR. REICH: I make my objection for record. I may file something. I'm making my objection for the record.

CHAIRMAN RUSSELL: Unless there is some other Board members that would like to ask the Department through Eric any further questions, or maybe it's just Eric, do so now, because we will be taking a lunch break here any moment.

MR. MIRES: I do have some just clarifications for my ignorance.

EXAMINATION

BY MR. MIRES:

Q. Can you define for me what the definition is of a nonattainment area.

A. Yes. It's pollutant specific, and the example I'll use is particulate matter less than ten microns, for example. PM10, an area, generally an area anywhere in the US, let's say Helena, for example, or let's use -- in this case we'll use Missoula is a PM10 nonattainment area. That means the level, the ambient concentration of particulate matter less than ten microns in the ambient air that we breathe every day is higher